

REMARKS

No new matter is added by this amendment. The present application was filed on July 26, 2001 with original claims 1-44 and claims priority to U.S. Provisional Patent Application Serial No. 60/221,761 entitled "SYSTEM FOR MINIMIZING INJURY AFTER COLLISION" filed July 31, 2000. The claims were subject to a restriction requirement and claims 1-16 and 24-36 were elected. In an amendment dated March 18, 2003, claims 4, 7, and 29 were cancelled, claims 1-6, 8-11, 24-28, 30, and 32 were amended and new claims 45-76 were added. By this amendment, claims 1, 6 and 24 have been amended and previously withdrawn claims 17-23 and 37-44 have been cancelled. The claims remaining in consideration are claims 1-3, 5, 6, 8-16, 30-36, and 45-76. Reconsideration is respectfully requested.

The Examiner objected to claim 6 because of an informality. Claim 6 has been amended to correct such deficiency.

Claims 1-3, 5, 12-14, 16, 24-28, 34, 35, and 54 were rejected under 35 USC §102(e) as being anticipated by US Patent 6,105,705 issued August 22, 2000 to Ian Faye ("Faye"). This rejection is respectfully traversed.

Faye discloses a method and system for controlling a motor vehicle brake system. The Faye system is designed to "provide measures allowing the vehicle to be held at standstill even in collisions with another vehicle or to be quickly brought to a standstill again" (column 1, lines 49-52). Thus, the Faye system is only actuated in the case of a collision, which may be based on vehicle acceleration, air bag deployment, wheel rotational speed, and/or actuation of the brakes (see column 3, lines 4-11). In the illustrated embodiment, in order for the Faye system to be actuated, two conditions must be pre-existing: (1) the vehicle is stopped or speed is less than a predetermined value **and** (2) the brake pedal or the parking brake must be actuated (see column 3, lines 32-50). If these conditions exist **and** a collision is detected,

braking power to the brakes is increased to a maximum value (see column 4, lines 1-5).

Claims 1, 5, 24, 27, and 28 are independent claims. Claims 2-3 and 16 are dependent upon claim 1. Claims 12-14 are ultimately dependent upon claim 5. Claims 25-26 are dependent upon claim 24. Claims 34-35 and 54 are ultimately dependent upon claim 27.

Amended independent claim 1 sets forth a system for use with a motor vehicle having at least one front wheel and at least one rear wheel. The system includes a brake system, a sensor and a controller. The brake system applies pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The sensor detects an occurrence of a collision of the motor vehicle and responsively producing a loss of control signal. The controller receives the loss of control signal and automatically actuates the brake system to slow and reorient the motor vehicle.

Amended independent claim 24 sets forth a method for use with a motor vehicle having at least one front wheel and at least one rear wheel and a brake system for applying pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The method includes the steps of detecting an occurrence of a collision of the motor vehicle and automatically actuating the brake system in response to detecting the loss of control event to slow and reorient the motor vehicle.

As stated above, the Faye system **only** actuates the brakes to hold the vehicle at a standstill or bring it back to a standstill. Faye does not teach or suggest reorienting the vehicle as required by amended independent claims 1 and 24. Thus applicant respectfully asserts that amended independent claim 1 is not taught nor suggested by Faye and requests that the §102(e) rejection be withdrawn.

Claims 2-3, 16 and 25-26 are ultimately dependent upon allowable independent claim 1 or allowable independent claim 24. Thus, for the reasons set forth above, and based on their

own merits, applicant respectfully asserts that claims 2-3, 16, and 25-26 are allowable over Faye and request that the §102(e) rejection be withdrawn.

Independent claim 5 sets forth a system for use with a motor vehicle having at least one front wheel and at least one rear wheel. The system includes a brake system, a sensor and a controller. The brake system applies pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The sensor detects an occurrence of a loss of control event of the motor vehicle and responsively producing a loss of control signal. The controller receives the loss of control signal and automatically actuates the brake system to reorient the motor vehicle.

As stated above, the Faye system **only** actuates the brakes to hold the vehicle at a standstill or bring it back to a standstill. Faye does not teach or suggest reorienting the vehicle as required by independent 5. Thus, applicant respectfully asserts that independent claim 5 is allowable over Faye and requests that the §102(e) rejection of claim 5 be withdrawn.

Claims 12-14 are ultimately dependent over allowable independent claim 5. Thus, for the reasons sets forth above, and based on their own merits, applicant respectfully asserts that dependent claims 12-14 are also allowable.

Independent claim 27 sets forth a method for use with a motor vehicle having at least one front wheel and at least one rear wheel and a brake system for applying pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The method detects an occurrence of a loss of control event of the motor vehicle and automatically actuates the brake system in response to detecting the loss of control to reorient the motor vehicle.

Independent claim 28 sets forth a method for use with a motor vehicle having at least one front wheel and at least one rear wheel and a brake system for applying pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The motor

vehicle includes a steering system for controllably steering the at least one front wheel and/or the at least one rear wheel. The method detects an occurrence of a loss of control event of the motor vehicle and reorients the motor vehicle through application of the brake system and/or the steering system after the loss of control event has occurred.

As discussed above, Faye does not teach reorienting the vehicle. The Faye system only applies the brakes to hold the vehicle at a standstill or to bring it (back) to a standstill. Thus, applicant respectfully asserts that Faye does not teach the present invention as set forth in independent claims 27 and 28 and requests that the §102(e) of claims 27 and 28 be withdrawn.

Claims 34-35 and 54 are ultimately dependent upon allowable independent claim 27. Thus, for the reasons set forth above and based on their own merits, applicant respectfully asserts that claims 34-35 and 54 are allowable over Faye.

Claims 5, 6, and 45-48 were rejected under 35 USC §102(b) as being anticipated by US Patent 5,927,830 issued July 27, 1999 to Kenji Tozu et al (Tozu). This rejection is respectfully traversed. Claims 5 and 6 are independent claims. Claims 45-48 are dependent upon either independent claim 5 or independent claim 6.

The Tozu system provides both steering and braking control in a anti-skid control. The steering control brakes to restrain either an understeer or an oversteering which may occur during cornering of a vehicle (see column 1, lines 14-19). The steering control utilizes one or more sensors located on the vehicle to determine when an oversteer or understeer condition exists. The brake system is used to provide small adjustments to the steering to correct this condition.

In contrast, independent claim 5 (see above) detects a loss of control, utilizes the brake system and automatically actuates the brake system to reorient the motor vehicle. Tozu provides no such teaching. Therefore, applicant respectfully asserts that the §102(e)

of claim 5 over Tozu is improper and requests that it be withdrawn.

Independent claim 6 sets forth a system for use with a motor vehicle having at least one front wheel and at least one rear wheel. The system includes a brake system, a steering system, a sensor and a controller. The brake system applies pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The steering system controllably steers the at least one front wheel and/or the at least one rear wheel. The sensor detects an occurrence of a loss of control event of the motor vehicle and responsively produces a loss of control signal. The controller receives the loss of control signal and automatically reorients the motor vehicle through application of the brake system and/or the steering system.

As discussed above, Tozu does not teach the present invention as set forth in independent claim 6.

Claims 6, 15, 45-46, 53, and 55 were rejected under 35 USC §103(a) as being unpatentable over Faye in view of Tozu. Claim 6 is an independent claim. As discussed above, neither Faye nor Tozu, singularly or in combination disclose the features set forth in independent claim 6. Furthermore, claims 15, 45-46, 53 and 55 are ultimately dependent upon allowable independent claims 1, 5, 24 or 27. Thus, for the reasons set forth above, and based on their own merits, applicant respectfully asserts that claims 6, 15, 45-46, 53 and 55 are allowable over Faye and Tozu and requests that the §103(a) rejection be withdrawn.

Claims 8, 9, 30, 31, 49, 50, 56 and 57 were rejected under 35 USC §103(a) as being unpatentable over Faye in view of Tozu in further view of US Patent 4,934,477 issued to Dai. Claims 8, 17, and 30 are independent claims.

Independent claim 8 sets forth a system for use with a motor vehicle having an engine and at least one front wheel and at least one rear wheel. The system includes a sensor and a controller. The sensor detects an occurrence of a loss of control event of the motor vehicle

and responsively produces a loss of control signal. The controller receives the loss of control signal and automatically reduces a power output of the engine in response to receiving the loss of control signal.

Independent claim 30 sets forth a method for use with a motor vehicle having an engine and at least one front wheel and at least one rear wheel and a brake system for applying pressure to resist the rotation of the at least one front wheel and/or the at least one rear wheel. The method includes the steps of detecting an occurrence of a loss of control event of the motor vehicle and reducing power output of the engine in response to detecting the occurrence of the loss of control event.

As discussed above, neither Faye nor Tozu discloses or teach detecting “a loss of control event of the motor vehicle” as required by independent claims 8 and 30. Faye **only** detects a collision which may be while the vehicle is at a standstill or below a predetermined speed. Tozu detects an understeer or oversteer condition. Neither a collision or understeer or oversteer condition are necessarily a loss of control condition. Thus, neither Faye nor Tozu meet this limitation.

The Examiner utilizes Dai to teach “a microprocessor 100 which functions to restrict the fuel supply, reducing a power output of the engine” (Office Action dated September 15, 2003, page 5, lines 7-8). However, Dai utilizes a emitter on a rear end of a first vehicle and a receiver on a front end of a second end of a second vehicle. The second vehicle is following the first vehicle. If the possibility of a rear-end collision is detected, then the brakes of the second vehicle may be actuated and the fuel supply to the engine of the second vehicle may be reduced. However, Dai also does not teach or suggest detecting “a loss of control event of the motor vehicle” as required by independent claims 8 and 30.

Therefore, applicant respectfully asserts that the §103(a) rejection of

independent claims 8 and 30 is improper and requests that it be withdrawn.

Claims 9, 49 and 50 are ultimately dependent upon allowable claim 8. Claims 31, 56 and 57 are ultimately dependent upon allowable claim 30. For the reasons set forth above, and based on their own merits, applicant respectfully asserts that the claims 9, 49, 50, 31, 56, and 57 are also allowable and requests that the §103(a) rejection be withdrawn.

Claims 8-11, 30-33, 49-52, and 56-59 were rejected under 35 USC §103(a) as being unpatentable over Faye in view of Tozu in further view of US Patent 5,805,103 issued September 8, 1998 to Ayumu Doi et al (Doi). This rejection is respectfully traversed.

Claims 8, 10, 30, and 32 are independent claims all requiring that a loss of control event is detected. As discussed above, neither Faye nor Tozu make such a teaching.

The Examiner utilizes Doi to teach “a control unit U having a cruise control function and is capable of controlling an engine output control means 6” (Office Action dated September 15, 2003, page 5, lines 17-19). However, Doi utilizes radar to monitor the distance between a vehicle and a second vehicle traveling immediately in front of the vehicle. If the second vehicle is decelerating, the Doi system may control the brake and/or engine to reduce the risk of a collision. However, Doi also does not teach or suggest teach detecting “a loss of control event of the motor vehicle” as required by independent claims 8, 10, 30, and 32.

Therefore, applicant respectfully asserts that the §103(a) rejection of independent claims 8, 10, 30 and 32 is improper and requests that it be withdrawn.

Claims 9, 49 and 50 are ultimately dependent upon allowable claim 8. Claims 11, 51, and 52 are ultimately dependent upon allowable claim 10. Claims 31, 56 and 57 are ultimately dependent upon allowable claim 30. Claims 33, 58, and 59 are ultimately dependent upon allowable claim 32. For the reasons set forth above, and based on their own merits, applicant respectfully asserts that the claims 9, 11, 49- 52, 31, 33 and 56-59 are also allowable and

requests that the §103(a) rejection be withdrawn

All of the Examiner's objections and rejections having been successfully overcome or made moot, Applicant respectfully asserts that the present application is now in condition for allowance and request a early notice of allowance. If the Examiner believes that a telephone interview would be helpful, please contact the undersigned at the number provided.

Respectfully submitted,

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